REMARKS

This Request for Continued Examination and Amendment follows the outstanding Official Action dated 01/05/04 and is intended as a complete and proper response thereto. In particular, the present paper is presented with the view of advancing prosecution of this application on its merits and hopefully placing this case in a clear condition for allowance.

In order to render this Amendment responsive, a Petition for Extension of Time to Respond Within the Third Month Pursuant to § 1.136(a) is submitted herewith in duplicate along with the requisite petition fee of $475.00 commensurate with the applicant's small entity status as previously established.

Claims 7 and 9-21 remain in the application. These remaining claims have been amended and as such, reexamination and reconsideration of the application, as amended, is requested.

As previously presented, claims 7 and 9-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Flock in view of Lightle. As in the previous responses, the examiner is reminded that for prior art references to be combined to render obvious a subsequent invention under § 103, there must be something in the prior art as a whole which suggests the desirability, and thus the obviousness, of making the combination. *Uniroyal v. Rudkin-Wiley*, 5 U.S.P.Q. 2d 1434, 1438(Fed. Cir. 1988). The teaching of the references can be

combined only if there is some suggestion or incentive in the prior art to do so. *In re Fine*, 5 U.S.P.Q. 2d 1596, 1599(Fed. Cir. 1988). Hindsight is forbidden. It is impermissible to use the claims as a framework from which to pick and choose individual references to recreate the claimed invention. *Id.* at 1600; *W.L. Gore*, 220 U.S.P.Q. at 312. Moreover, the mere fact that a prior art structure could be modified to produce the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1783 (Fed. Cir. 1992); *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

The Flock 1,943,914 patent from 1930 discloses a method and means for raising sunken pavement and the like. The Flock patent generally shows an early mud pumping or mud jacking apparatus in which loose or plastic material is pumped with enough hydraulic force to actually lift sagging pavement or concrete. This is done by placing a pipe through a hole in the concrete and using enough hydraulic pressure or force to force the material into the hole such that the material actually lifts the sagging concrete or cement. This can be clearly seen throughout the description including column 1 beginning at line 22 where it stats "This particular phase of the invention is carried out by pumping, tamping, or otherwise forcing a sufficient quantity of loose or plastic material under the sagging structure to lift the latter into its proper or original position...then forcing the filling material downward through the hole to react under pressure against the earth's subsoil and lower surface of the pavement in a manner to raise the latter. The resulting action partakes of

the nature of the operation of a hydraulic press, the permanent subsoil of the earth serving as a cylinder for the reception of the substantially incompressible filling material, and the sunken portion of the pavement being movable under pressure to serve as the piston of the press."

As can be seen, the material is pumped through a cylinder through the use of a pump piston or tamping plunger to sufficiently push the material in to the hole. This application further goes on to describe the use of wet materials, for example column 2 line 13, "Plastic cement or concrete may be used, as well as loose materials such as earth, clay, etc. In fact any substance, which can be forced into position and which can thereafter become substantially incompressible should be found satisfactory." Further, in column 3, beginning at line 84 the application talks about when the material is of a very plastic or fluidic nature it may be necessary to utilize a flap check valve 34.

As can be clearly seen from the Flock application, Flock teaches a method of mud pumping or mud jacking which is commonly known as has been discussed previously in this application. No where does Flock disclose the use of air pressure to lift the concrete and then the subsequent movement of a dried sand to fill the void as the concrete is lifted by the air pressure. Rather, Flock discloses the use of a fluid cement, plastic material or other material pumped with enough force that the material actually lifts the cement rather than air or gas as disclosed in the current application. It is argued by the examiner that Flock discloses an apparatus for raising sunken pavement or concrete under pressure as with compressed air without the use of jacks or

lifting apparatus, said apparatus comprises an elongate air and sand delivery line. In fact, Flock discloses the use of a fluidic material to actually do the raising. Any air contained in the material or trapped as bubbles is actually counterproductive to Flock's use as Flock relies upon the force of the materials to raise the sunken concrete rather than air pressure. It no where discusses the use of air or any other gas or pump.

The Flock patent discloses a piston or detachable pilot 13 and a tube 17 used as a hydraulic cylinder. The examiner further states that this contains a valve assembly 34 which was previously discussed as a check valve to keep wet fluidic material from flowing backwards which in fact does teach away from the application as currently claimed which uses a well dried mason sand mixed with air and specifically discuses that liquids are harmful to this application whereas Flock is using a check valve 34 to prevent fluidic material, i.e. teaching the use of fluidic material from flowing backward through a nozzle portion 16. The examiner further shows a threaded portion 14 which is merely the threads to hold the nozzle together and not threads used to hold the injector gun into a substantially fluid type connection with the drilled hole. Rather, Flock discloses the use of a base 19 that may be secured to the pavement.

Finally, the examiner has relied on the Lightle 5,795,108 patent disclosing a method of moving and placing granular materials to show the use of a sand and air supply system. The Lightle patent discloses the use of hoppers which may release sand onto a conveyor belt that travels through a lift gate used to regulate

the amount of sand released. The sand is dumped into a hopper 19 which drops the sand into multiple sand guns. These sand guns contain a hydraulic motor with a spinning disk having pockets to break up the sand and distribute the sand throughout the sand gun. Compressed air is then supplied to the sand gun and forced into the pockets of the spinning disk to push the sand and compressed air through an outlet hose 16. This outlet hose 16 may also be supplied with a water valve for wetting the material as it is applied. The Lightle discloses the use of this apparatus for supplying sand on golf courses and in particular, for filing sand traps on golf courses or moving sand from one spot to another and in no way discloses the use of packing the sand into a tight location or air forces sufficient to create room for the sand nor does it disclose the use of well dried mason sand which flows. In fact, Lightle teaches away from this in that it requires spinning motors to break up clumps in the sand such as those caused by moisture and further discloses the use of water or liquid sprayed with the sand air mixture. Again, this teaches directly away from the application at hand.

The examiner argues that Lightle teaches a method and apparatus for placing granular materials including a mixing chamber which has a smaller air source pipe 31 fitted inside a large diameter sand outlet 40 thereby creating a Venturi effect for pressurizing the sand for movement through the distribution hose. The applicant respectfully takes issues with the examiners finding in this case as it is believed Lightle does not show a smaller air source pipe fitted inside a large diameter sand outlet which creates a Venturi effect for pressurizing the sand. Rather, Lightle shows the use of a large chamber with a spinning disk

which catches and breaks up the sand and puts it into little pockets. The air is then released in a manifold into these little pockets to push the sand and air out of the pockets and out of the hose 16. No where does it disclose any type of Venturi effect or show an apparatus that would create a Venturi effect.

The examiner states that a consistent metered amount of pressurized sand to a remote point of distribution is reasonably suggested by both Flock and Lightle. Again, no where in Flock does it show the measuring of or metering of sand or filling material. Rather, Flock discloses a hydraulic cylinder type press which pumps a fluidic material in unmetered amounts. Metering is performed by the user actually turning the machine on or off. Further, neither of the applications show an injector gun having a gun bleed off valve for releasing excess pressure from said gun or the use of a gun nozzle with a threaded end that may be fit into a drilled hole to create a fluid type connection.

Finally, as stated above, case law requires that the teaching of the references can be combined only if there is some suggestion or incentive in the prior art to do so. Hindsight is forbidden. In this case, it has been shown by the applicant that Flock and Lightle both teach away from the use of compressed air for lifting and the placement of dried sand and both in fact show the use of wetted or plastic fluidic materials which is clearly taught in Flock as Flock, in some cases, requires the use of the check valve 34 to prevent the material from flowing backwards in the line and Lightle teaches the use of a spray nozzle with a water hose attached to wet the material.

Further, no where is there any teaching of the 1930 Flock mud pump type apparatus that it would be of any value to combine this apparatus with a 1996 method for filing sand traps on golf courses or moving sand from one location to another for use in golf courses and sand traps in order to come up with the application as currently claimed.

As previously discussed, it is recognized that with most mud pumpers, it is known to drill a hole in the concrete prior to pumping pressurized mud under the slab. The Flock patent generally discloses materials that are in a fluidic state that dry and as previously discussed, this has other problems not solved by Flock that are solved in the current application. Namely, as materials dry they shrink, thus causing slabs to resettle. Mud jacking is known in the art and this is recognized by the applicant. However, mud jacking has many flaws, namely that the fill material, mud or fluidic material, dry over time and contract during the drying process. Thus, slabs that are lifted with wet materials which dry over time change in elevation, often requiring this process to be performed in multiple stages on multiple days.

The advantage of the current use of air and sand is that the air lifts the pavement allowing the sand to be placed under the pavement and the use of the dried sand which does not expand or contact over time as it is already dry, allows the air to escape from under the slab within seconds. This allows the slab to settle back down to a level on top of the sand and the operator can continue on until the slab is at an appropriate level. Thus, in contrast to the examiners claims that Flock describes the use

of air and sand. It has been shown that Flock does not describe the use of air or even gas but rather describes the use of a liquid or fluidic mixture of material. This system requires a completely different type of pump and delivery apparatus and contains the limitations as previously discussed.

Finally, as described above, it is believed there is no incentive anywhere in the art to combine the 1930 cylinder type method and apparatus of Flock with the 1996 Lightle patent which teaches a method for moving sand from a truck to sand traps on golf courses. It is believed the applicant has in fact shown how these applications teach away from the current application as claimed.

It is believed that through this discussion, the current application has been shown not only to distinguish from the prior art but also to show that the prior art combination is improper and is clearly hindsight.

In light of the foregoing discussion of the applied art of record, the presentation of the amended schedule of claims and the indication as to how such claims are considered to clearly and patentably define over the references, it is believed that the patentable nature of the claims has been demonstrated.

In view of the above remarks, reconsideration and allowance of the claims is kindly requested. Should any matters remain outstanding that may be handle over the phone the examiner is encouraged to call.

Respectfully Submitted,

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